DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials Quality Assurance and Source Inspection

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Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-016843 Address: 333 Burma Road **Date Inspected:** 24-Aug-2010

City: Oakland, CA 94607

OSM Arrival Time: 1900 **Project Name:** SAS Superstructure **OSM Departure Time:** 700 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

CWI Name: See Below **CWI Present:** Yes No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A Yes N/A **Electrode to specification:** No Weld Procedures Followed: Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes No N/A **Approved Drawings:** Yes No **Approved WPS:** Yes No N/A **Delayed / Cancelled:**

34-0006 **Bridge No: Component:** OBG

Summary of Items Observed: CWI Inspector: Mr. Shi Lei

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

OBG Segment Trial Assembly

This QA Inspector observed ZPMC welder Mr. Xu Changhong, stencil 040611 used shielded metal arc welding procedure specification WPS-345-SMAW-4G(4F)-FCM-Repair-1 to complete repairs of weld OBW9A-008 as directed on weld repair document B-WR14632. This weld repair document was issued to perform repairs of ultrasonic rejections in OBG segment 9DW to 9EW top deck butt weld. This QA Inspector observed a welding current of approximately 150 amps, Mr. Xu Changhong appeared to be certified to make this weld and the base materials were being preheated with a torch. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Wang Xiaomin, stencil 046709 used shielded metal arc welding procedure specification WPS-345-SMAW-4G(4F)-FCM-Repair-1 to complete repairs of weld OBW9A-007 as directed on weld repair document B-WR14632. This weld repair document was issued to perform repairs of ultrasonic rejections in OBG segment 9DW to 9EW top deck butt weld. This QA Inspector observed Mr. Wang

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

Xiaomin appeared to be certified to make this weld and the base materials were being preheated with a torch. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Cheng Chong Lang, stencil 251194 used shielded metal arc welding procedure WPS-345-SMAW-2G(2F)-Repair-1 to make weld repairs of visual rejections on OBG segments 9DW to 9EW bottom "T" stiffener hold back welds BP100-001-031 through -042. This QA Inspector observed a welding current of approximately 170 amps, Mr. Cheng Chong Lang appeared to be certified to make these welds and ZPMC personnel used a torch to preheat the base material prior to welding. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Zhang Qiu Jun stencil 057333 used shielded metal arc welding procedure specification WPS-B-P-2112-FCM-1 to complete temporary welds to secure OBG segment 9EW / 10AW counterweight #84 to the top deck plate. These welds were made to secure the counterweight in the proper location prior to drilling bolt holes in the counterweight and OBG segments. This QA Inspector observed a welding current of approximately 175 amps, Mr. Zhang Qiu Jun appeared to be certified to make this weld and the base materials were preheated with a torch. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Xu Zichuan, stencil 205098 used shielded metal arc welding procedure specification WPS-B-P-2112-FCM-1 to complete temporary welds to secure OBG segment 9BW / 9CW counterweight to the top deck plate. These welds were made to secure the counterweight in the proper location prior to drilling bolt holes in the counterweight and OBG segments. This QA Inspector observed Mr. Xu Zichuan appeared to be certified to make this weld and the base materials appear to have been were preheated with a torch. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Yang Xuhe, stencil 057795 used shielded metal arc welding procedure WPS-345-SMAW-3G(3F)-Repair to make weld repairs of visual rejections on OBG cross beam 14 stiffener hold back welds. This QA Inspector observed Mr. Yang Xuhe appeared to be certified to make these welds and ZPMC personnel used a torch to preheat the base material prior to welding. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Han Yiaofeng, stencil 054467 used shielded metal arc welding procedure WPS-345-SMAW-4G(4F)-Repair to make weld repairs of visual rejections on OBG segment 9DW stiffener hold back welds adjacent to where cross beam 12 will be attached. This QA Inspector observed Mr. Han Yiaofeng appeared to be certified to make these welds and ZPMC personnel used a torch to preheat the base material prior to welding. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Hu Yanming, stencil 062092 used shielded metal arc welding procedure WPS-345-SMAW-3G(3F)-Repair to make weld repairs of visual rejections on OBG cross beam 12 stiffener hold back welds. This QA Inspector observed a welding current of approximately 170 amps, Mr. Han Yiaofeng appeared to be certified to make these welds and ZPMC personnel used a torch to preheat the base material prior to welding. Items observed on this date appeared to generally comply with applicable contract documents. See the photograph below for additional information.

WELDING INSPECTION REPORT

(Continued Page 3 of 3)



Summary of Conversations:

See Above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Carreon, Albert	QA Reviewer